REMARKS

Status

This Amendment is responsive to the Office Action dated June 18, 2004, in which Claims 1-3 were rejected. Claims 1-3 are pending in the application, and are presented for reconsideration and allowance.

Objection to Abstract

The Abstract has been amended to obviate the objection to the use of "comprising". Reconsideration and withdrawal of this objection is therefore requested.

Claim Rejection - 35 USC 112

Claim 3 stands rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 has been amended to obviate this rejection. Reconsideration and withdrawal of this rejection is therefore requested.

Claim Rejections - 35 USC 102 and 35 USC 103

Claims 1-2 are rejected under 35 USC 102(b) as being anticipated by US Patent No. 5,112,127 (*Carrabba*). This rejection is respectfully traversed.

Claim 3 is rejected under 35 USC 103(a) as being unpatentable over US Patent No. 5,112,127 (*Carrabba*) in view of US Patent Application Publication No. US 2004/0075844A1 (*Marron*). This rejection is respectfully traversed.

According to the present invention, as defined in the claims, there is provided an imaging system which supplements the wide-angle artifact suppression of dichroic filters in a fluorescent imaging system. The wide-angle artifact arises from the dependence of dichroic filters on the angle of incidence of light directed to the imaging system.

According to the invention as defined by claim 1, there is provided an imaging system including a wide-angle lens, a dichroic filter positioned in front of the wide-angle lens, and a high pass filter positioned between the wide-angle lens and the dichroic filter. The dichroic filter passes light of a first band of

frequencies and successfully rejects light of a second band of frequencies which is incident on the wide-angle lens up to a narrow angle normal to the wide-angle lens, but may pass stray light of the second band of frequencies incident on the wide-angle lens at a wide angle to the normal of the wide-angle lens. The high pass filter rejects any stray light which may have passed through the dichroic filter of the second range of frequencies incident at a wide angle to the wide-angle lens.

According to the invention defined by claim 2, there is provided an imaging system including a wide-angle lens, a dichroic bandpass filter positioned in front of the wide-angle lens, and a high pass filter positioned between the wide-angle lens and the dichroic bandpass filter. The wide-angle lens images a fluorescent image on an electronic sensor. The dichroic bandpass filter passes the emission spectrum of the fluorescent image and successfully filters out excitation light incident on the wide-angle lens up to a narrow angle normal to the wide angle lens, but stray excitation light incident on the wide-angle lens at a wide angle to the normal of the wide-angle lens may be passed. The high pass filter filters any stray wide-angle excitation light that may have been passed by the dichroic filter.

Claim 3 is dependent on claim 2 and is patentable for the same reasons as set forth with regard to claim 2.

It is clear that amended claims 1-3 are novel and nonobvious over the cited references and should be allowed. More specifically, the point of the *Carrabba* apparatus is not fluorescent imaging, but Raman spectroscopy. The fluorescent principle in *Carrabba* differs from the present invention. Raman resolves fluorescent spectra caused by molecular motion and the light scattered from a sample contains the high intensity excitation source wavelength and the weaker Raman wavelengths. Because dichroic filter 20 "is typically not 100% efficient" (Col. 3, line 67), filter 44 must be provided to provide "a second level of discrimination" (Col. 2, lines 65-66) against the high intensity excitation light. There is no disclosure in *Carrabba* of wide-angle light problems. Since the excitation light is projected parallel to the optical axis of the apparatus (see Figure 2) and would be incident on lens 40 at a narrow angle to the normal to lens 40, the inefficiency of dichroic filter 20 in failing to reject such light requires the addition of filter 44. In the present invention, since excitation light at a narrow

angle of incidence is successfully rejected by the dichroic filter, an extra high pass filter would not be needed were it not for the stray wide-angle excitation light. *Carrabba* gives no specification regarding filter 44, especially regarding the specifics of wide-angle light attenuation which is a point of the present invention. Moreover, the lens 40 of *Carrabba's* Figure 2 is not a wide angle lens as in the claimed invention. Thus, *Carrabba* fails to disclose important elements of the invention of claims 1-3 which are clearly novel and nonobvious over *Carrabba*.

Marron is completely inapposite to the present invention. Element 92 in *Marron* is a neutral density filter for balancing the intensity of a refernce beam and an object beam to make them similar in strength (Par. 0064, lines 1-5). The neutral density filter is non-spectral and it is essential that it have no spectral qualities. The exercise of estimating the needed neutral density to attenuate one image intensity to match another is relatively simple. Devising a filter specification for the invention defined in claim 3, involves many parameters, among which are appreciation of angle-of-view, the wavelength dependence of multi-coated dichroic filters throughout the cut-on/off regions of their spectra and its angular dependence, and the wavelength dependence of absorbing filters. None of these factors are addressed by the *Marron* non-spectral, neutral density filter. Clearly neither taken alone nor in combination with *Carrabba* does *Marron* render obvious the invention of claim 3.

It is submitted that claims 1-3 are novel and nonobvious over the cited references and should be allowed.

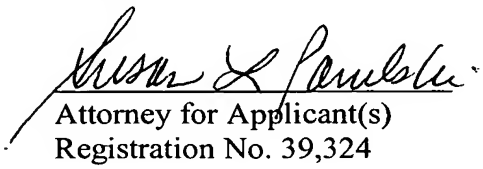
Summary

Should the Examiner consider that additional amendments are necessary to place the application in condition for allowance, the favor is requested of a telephone call to the undersigned counsel for the purpose of discussing such amendments.

For the reasons set forth above, it is believed that the application is in condition for allowance. Accordingly, reconsideration and favorable action are respectfully solicited.

The Commissioner is hereby authorized to charge any fees in connection with this communication to Eastman Kodak Company Deposit Account No. 05-0225.

Respectfully submitted,



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